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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

AZAD, ABUL K

ART UNIT

PAPER NUMBER

2654

DATE MAILED: 01/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/222,073

Applicant(s)

SCHALK ET AL.

Examiner

ABUL K. AZAD

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,7,13-16 and 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,7,13-16 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 September 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. This action is in response to the communication filed on October 30, 2002.
2. Claims 1-5, 7, 13-16 and 18 are pending in this action. Claims 1 and 18 have been amended.
3. The applicant's arguments with respect to claims 1-5, 13-16 and 18 have been fully considered but they are not deemed to be persuasive. For examiner's response to the applicant's arguments or comments, see the detailed discussion in the Response to the Arguments section.
4. In view of applicant's amendment the claim rejection under 35 USC § 112, first and second Paragraph set forth in the previous office action (Paper No. 15) is hereby withdrawn.

Drawings

5. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on September 19, 2000 have not been approved by the examiner. A proper drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The correction to the drawings will not be held in abeyance.
6. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the features: repeated spoken digit string to generate a second list, a comparison of the first and second list

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and performing additional verification techniques must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claim 18 rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. As per claim 18, the amended claim stated, "step of prompting entry of a spoken digit string prior to step (a) at a predetermined amount of time before executing step (b)", wherein the specification does not describe "at a predetermine amount of time before executing step (b)".

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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10. Claims 1-5, 7, 13-16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goldberg (US 6,122,612) in view of Waibel et al. (US 5,712,957).

As per claim 1, Goldberg teaches, "a method of recognizing a spoken digit string," comprising:

"(a) receiving the spoken digit string" (col. 2, lines 45-65, input identifier);

"(b) analyzing the spoken digit string to generate a list of hypothesized digit strings arranged in ranked order based on a likelihood of matching the spoken digit string" (col. 7, lines 1-36, here check-sum operation is used to generate a list of digit string and col. 9, line 24 to col. 10, line 61; here a list of digit strings are arranged based on the likelihood score 'probability score' and any score below the predetermined threshold should be eliminated);

"(c) determining whether individual hypothesized strings of said list satisfy a given constraint, using a given knowledge based recognition strategy" (col. 10, lines 62-67, reads on "compares each remaining substitute identifier with the reference identifiers in data base");

"(d) selecting the first string in the list satisfying the constraint as the recognized string" (col. 10, line 66 to col. 11, line 11; at least one match is found, the user is accepted);

"if none of the hypothesized digit strings satisfy the constrain, (e) prompting entry of the input identifier again" (col. 6, lines 6-11, prompted to provide the input identifier again);

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“ (e) prompting entry of a repeated spoken digit string, which is a repeat of the spoken digit string entered in step (a)” (col. 6, lines 1-11, reads on “prompt to provide the input identifier again”);

(ii) “performing additional verification techniques to determine the correct digit string until the constraint is satisfied, and then subsequently selecting the correct digit string” (Fig. 5, elements 535 and 550, as two different techniques to determine the correct digit string and the repeating loop 255 confirm determination of correct digit).

Goldberg does not explicitly teach, “analyzing the repeated spoken digit string to generate a second list of hypothesized digit strings arranged in ranked order based on a likelihood of matching the repeated spoken digit string and selecting the recognized string in accordance with a comparison of the first and second list”. However, Waibel teaches as per Fig. 3 and 4, from a spoken entry, engine 14 generates n-best list and score locate error create alternative list input alternative list to engine 14, Re-spoken the said spoken entry, engine 14 produces secondary alternative list from secondary utterance, and comparison of primary and secondary list a best match is found. Therefore, It would have been obvious to one of ordinary skill in the art at the time of the invention to use Waibles teaching in the invention of Goldberg so that a high degree of accuracy is maintained in finding a match for an input identifier (col. 2, lines 16-23).

As per claim 2, Goldberg teaches, “said knowledge based recognition strategy comprises a database matching scheme” (col. 5, lines 4-18, database).

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As per claim 3, Goldberg teaches, "wherein step (c) comprises searching a database of valid data strings to determine whether any of the hypothesized digit strings match one of the valid digit strings" (col. 5, lines 4-18).

As per claim 4, Goldberg teaches, "wherein the knowledge based recognition strategy is a checksum scheme" (col. 5, lines 4-18, checksum).

As per claim 5, Goldberg teaches, "wherein the spoken digit string includes a checksum digit, and wherein step (c) comprises calculating a checksum of the hypothesized digit strings and determining whether the checksum matches the value of the checksum digit" (col. 5, lines 19-35).

As per claim 7, Goldberg does not explicitly teach, "wherein the checksum scheme utilizes a Luhan Checksum algorithm." However, the applicant acknowledges that Luhn checksum algorithm is well known in the art (Specification Page 9). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the checksum scheme as a Luhan Checksum algorithm because the choice of the Checksum algorithm is routine experimentation and optimization in the absence of criticality.

As per claim 13, Goldberg teaches, "wherein the knowledge based recognition strategy is a digit positional strategy and the constraining is a given digit position" (col. 5, lines 36-59).

As per claim 14, Goldberg teaches, "wherein the knowledge based recognition strategy is a digit string length strategy and the constraint is a given digit string length" (col. 5, lines 36-59).

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As per claims 15 and 16, they are interpreted and thus rejected for the same reasons set forth in the rejection of claim 1.

11. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Goldberg (US 6,122,612) and Waibel et al. (US 5,712,957) as applied to claim 1 above, and further in view of well-known prior art (MPEP 2144.03).

As per claim 18, Goldberg teaches, "step of prompting entry of a spoken digit string prior to step (a) (col. 6, lines 1-11, reads on "prompt to provide the input identifier again"). However, Goldberg does not explicitly teach prompt to provide a spoken digit string at a predetermined amount of time before executing step (b). Official Notice is taken on the well-known process to prompt providing a spoken digit string at a predetermined amount of time. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to prompt providing a spoken digit string at a predetermined amount of time because of the convenience of the system to accept a spoken digit string at a predetermined amount of time after the prompt for recognition process.

Response to Arguments

12. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re*

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Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation to combine Goldberg with Waibles teaching is high degree of accuracy is maintained in finding a match for an input identifier (Waibles, col. 2, lines 16-23).

13. The applicant further argues: “Goldburg clearly fails to request repeat and then alternative verification techniques, and Waibel fails to teach the use of alternative verification”.

In response to applicant’s argument the examiner disagrees with the applicant’s assertion. “Goldburg teaches to request repeat at col. 6, lines 1-11, reads on “prompt to provide the input identifier again”, and then alternative verification techniques at Fig. 5, stated above in claim 1, rejection.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Abul K. Azad** whose telephone number is (703) 305-

3838.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Marsha D. Banks-Harold**, can be reached at (703) 305-4379.

Any response to this action should be mailed to:

Commissioner for Patents

Washington, D.C. 20231

Or faxed to:

(703) 872-9314

(For informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center's Customer Service Office whose telephone number is (703) 306-0377.

Marsha D Banks-Harold
MARSHA D. BANKS-HAROLD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

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Abul K. Azad

January 4, 2003